EXHIBIT D

FILED UNDER SEAL

GOOGLE'S INFRINGEMENT OF SONOS'S '885 AND '966 PATENTS

'885 and '966 Infringement – Overview

➢   July 2022: Court found that Google's players infringe claim 1 of the '885 patent (Dkt. 309)

➢   December 2022: Google added the StopCurrentApp() function to its infringing players and asserts that its "redesigned" players do <u>not continue</u> to "operat[e] in standalone mode" <u>after</u> being added to a new or pre-existing "speaker group" (a claimed "zone scene")

➢   Sonos does not need to show infringement for both new and pre-existing "speaker groups" – a single infringing scenario is sufficient

➢   Factual disputes:

1)   Whether a "redesigned" player that is not "launched" and/or not playing audio can be "operating in standalone mode"

2)   Whether a "redesigned" player that is added to a new "speaker group" <u>operates</u> in group mode prior to the new "speaker" group being "launched" (the claimed "invoked")

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'885 and '966 Infringement – Overview

➢ Sonos asserts that Google's "redesigned" players infringe the asserted claims of the '885 and '966 patents

➢ The StopCurrentApp() function causes a "redesigned" player to stop playing any audio it is playing when it is added to a new Google "speaker group" (a claimed "zone scene")

➢ StopCurrentApp() does <u>not</u> cause a "redesigned" player that is added to a new "speaker group" to transition from standalone mode for individual playback to group mode for synchronous playback

➢ Instead, a "redesigned" player that is added to a new "speaker group" will not transition from standalone mode to group mode until the "speaker group" is "launched" (the claimed "invoked")

  • Same functionality as Google's prior infringing players

  • Court's prior infringement ruling applies

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Addition of the StopCurrentApp() Function Is the Only Change

**Sonos's Expert
Dr. Kevin Almeroth**

92.   Based on my analysis of the source code produced at SC-GOOG-SONOSNDCA-001598 - SC-GOOG-SONOSNDCA-001682, it appears to me that the functionality carried out by an Accused Google Player installed with newly-released firmware version 1.56.324896 when receiving a "join_group" message indicating that the Accused Google Player has been added to a new speaker group is very similar to the functionality that is represented by the foregoing source code path. In fact, the only relevant change I have observed in the source code is that MultizoneManager::RefreshDeviceGroups() function now calls an additional function named MultizoneManager::StopCurrentApp() (or "StopCurrentApp()" for short) prior to calling the MultizoneManager::AddGroup() function.   This is illustrated by the following excerpt of the MultizoneManager::RefreshDeviceGroups() function that is reproduced in Dr. Schonfeld's Rebuttal Report:

```
base::flat_set<std::string> group_uuids({virtual_group_uuid_});
for (const auto& g : local_groups) {
    group_uuids.insert(g.uuid);
    auto it = groups_.find(g.uuid);
    if (it == groups_.end()) {
        StopCurrentApp();
        AddGroup(g);
    } else if (it->second->Reconfigure(g)) {
        SaveGroupConfig(g);
    } else {
        continue;
    }
    groups_changed = true;
}
```

Schonfeld Rebuttal Report at ¶ 59 (citing SC-GOOG-SONOSNDCA-001637 – 38); *see also* 1/25/2023 K. MacKay Rough Dep. Tr. at 9:19-11:4, 23:13-16 (Google's corporate designee testifying that the only change made to the RefreshDeviceGroups() function relative to prior versions of the source code was the addition of the StopCurrentApp() function and also confirming that there were no changes made to the AddGroup() function called by the RefreshDeviceGroups() function relative to prior versions of the source code); Sonos Dep. Ex. 1320-1321.

Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 92

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"Redesigned" Players Do Not Transition to Group Mode Until Launched

Sonos's Expert
Dr. Kevin Almeroth

148.   Based on my evaluation of the updated functionality of the Accused Google Players, including my testing of Accused Google Players installed with firmware version 1.56.324896, my review of the new source code for firmware version 1.56.324896, and the testimony of Mr. MacKay, it is my opinion that an Accused Google Player installed with firmware version 1.56.324896 continues to operate in "standalone mode" after being added to a new speaker group, and does not begin operating in a grouped mode until the speaker group is later selected for invocation by a user. *See* Sections IX.A, IX.B. And because an Accused Google Player installed with firmware version 1.56.324896 continues to operate in "standalone mode" after being added to a new speaker group, such an Accused Google Player is programmed with the capability to receive multiple "indication[s]" that the Accused Google Player "has been added" to multiple different speaker groups (*i.e.*, multiple join_group messages) while continuing to operate in "standalone mode" until one of the speaker groups has been selected for invocation, which satisfies claim limitation 1.8 of the '885 Patent.

Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 148

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Overview of "Zone Scene" Technology - Figure 6 of '885 Patent
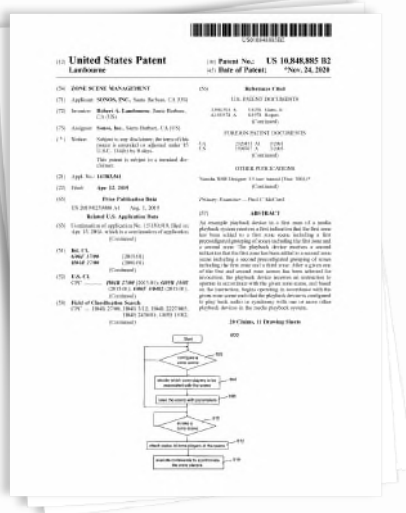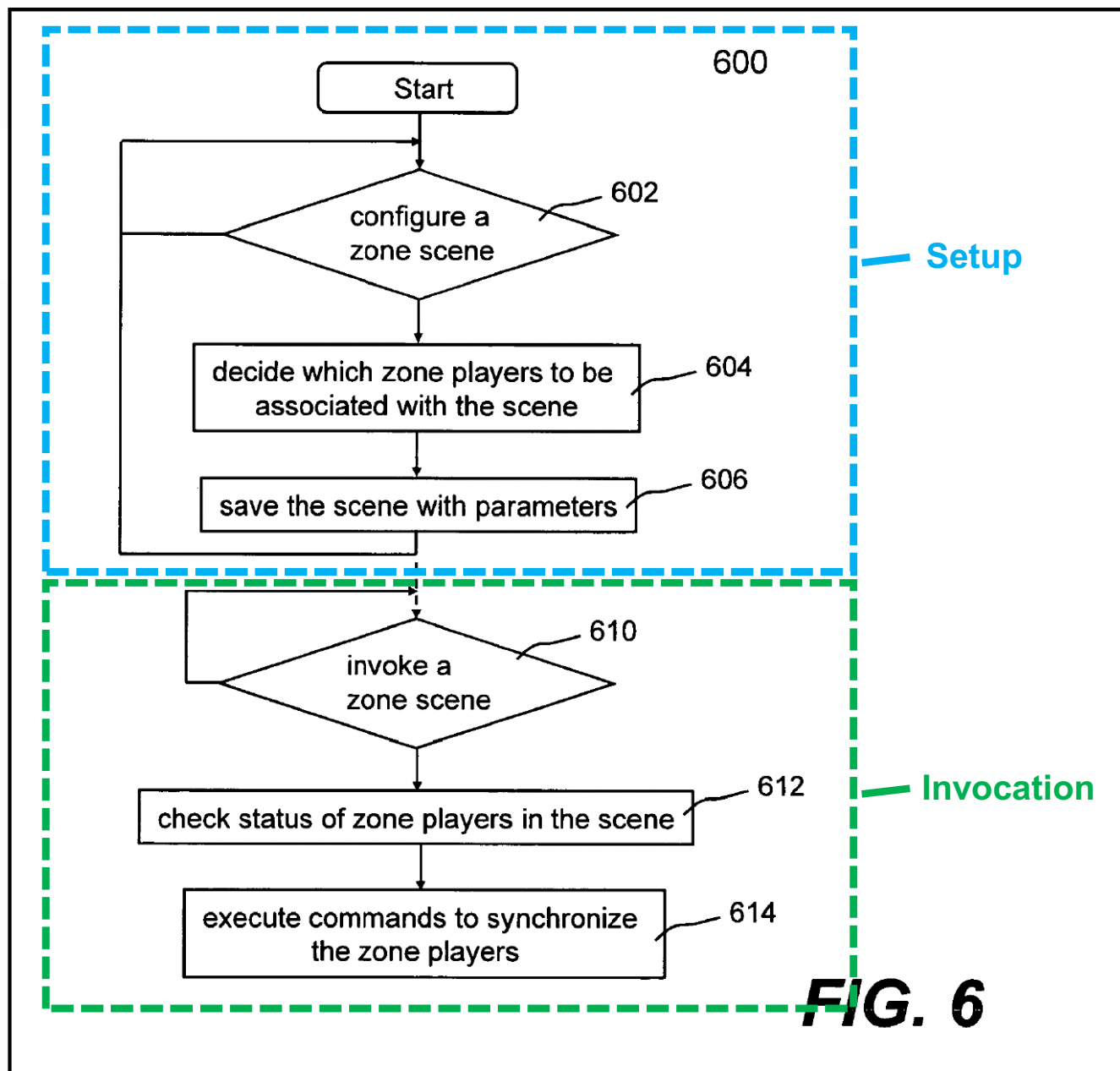

'885 Patent, Fig. 6

Claim 1 of '885 Patent

1.   **[1.0]** A first zone player comprising: **... [1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

> **[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

> **[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.
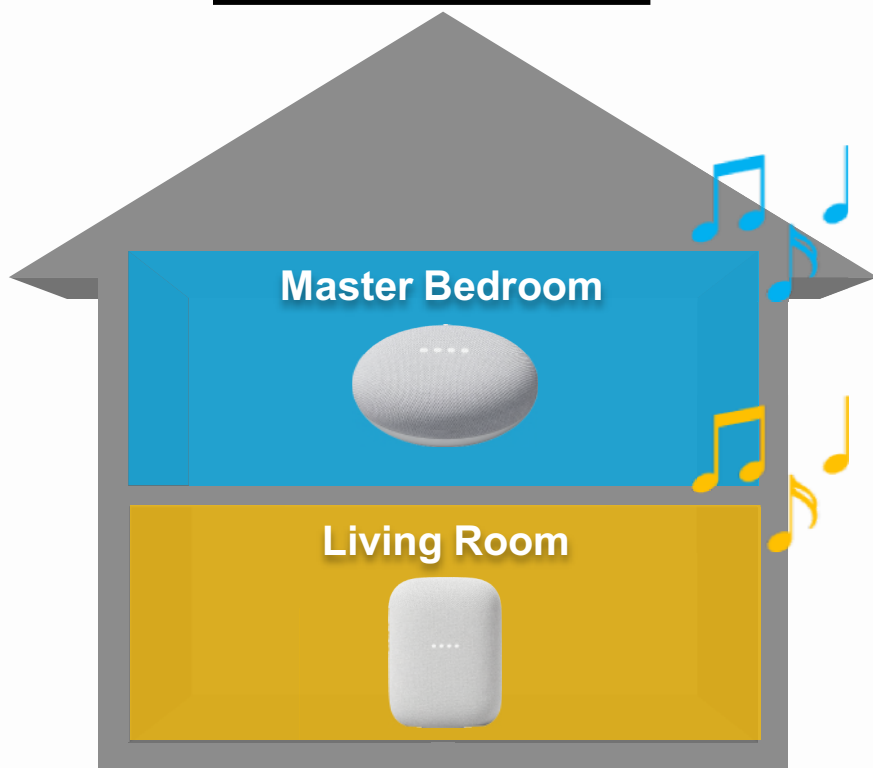
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What is "Standalone Mode"?

➢ '885 claim 1 recites "operating in a <u>standalone mode</u> in which the first zone player is configured to play back media individually"

➢ A fundamental characteristic of any audio player that is plugged in and operating is that it is configured to play back audio, either individually or as part of a group

➢ In '885 claim 1, "standalone mode" is used to distinguish the operating mode of a player that is configured for individual playback from the operating mode of a player that is configured for synchronous group playback (referred to herein as "group mode")

➢ '885 claim 1 equates "standalone mode" with being "<u>configured to</u> play back media individually," <u>not</u> with <u>actively</u> playing media

• A player can be in "standalone mode" whether or not the player is actively playing audio
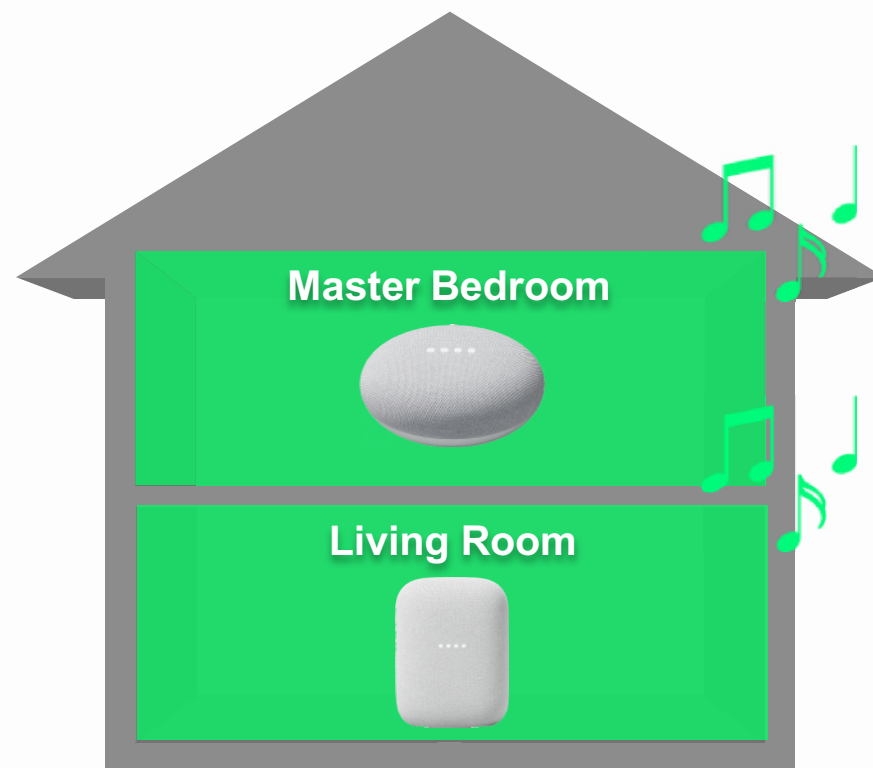
Dkt. 483-4 (11/30/22 Almeroth Opening Report) at ¶ 126, 409-412
Dkt. 508-8 (7/18/22 Almeroth Supp Opening Showdown Report) at ¶ 163-164

Only Two Modes - "Standalone Mode" or Group Mode

➢ In a multiroom audio system like Google's, a player is either operating in (1) "standalone mode" for individual playback or (2) group mode for synchronous group playback – no other operating mode

Standalone Mode　　　　　　**Group Mode**

Dkt. 483-4 (11/30/22 Almeroth Opening Report) at ¶ 126, 409-412

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Only Two Modes - "Standalone Mode" or Group Mode

➤ Google's expert confirmed that a player is in "standalone mode" if it is not in group mode

Google's Expert
Dr. Dan Schonfeld

Q. What does it mean for a player to be configured to play back audio individually?

A. That it is not configured to play as part of the group ….

Dkt. 508-15 (8/31/2022 Schonfeld Dep Tr.) at 51:4-7

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"Standalone Mode" Does <u>Not</u> Require Active Playback

➢   Google's expert confirmed that "standalone mode" does not require a player to be actively playing audio
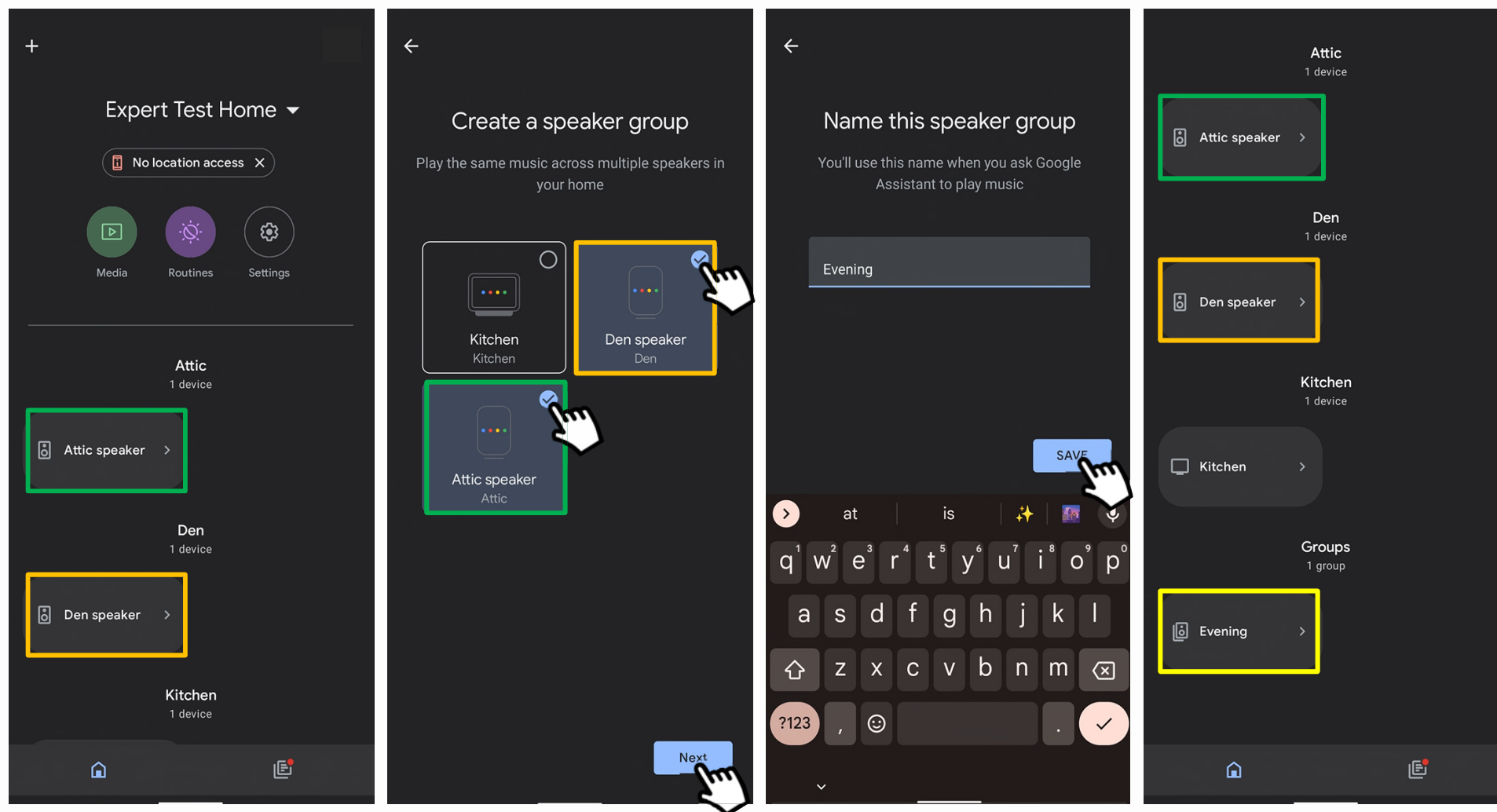

Q. In order to meet the standalone mode, does the zone player have to be playing audio?

A. That's not my understanding.

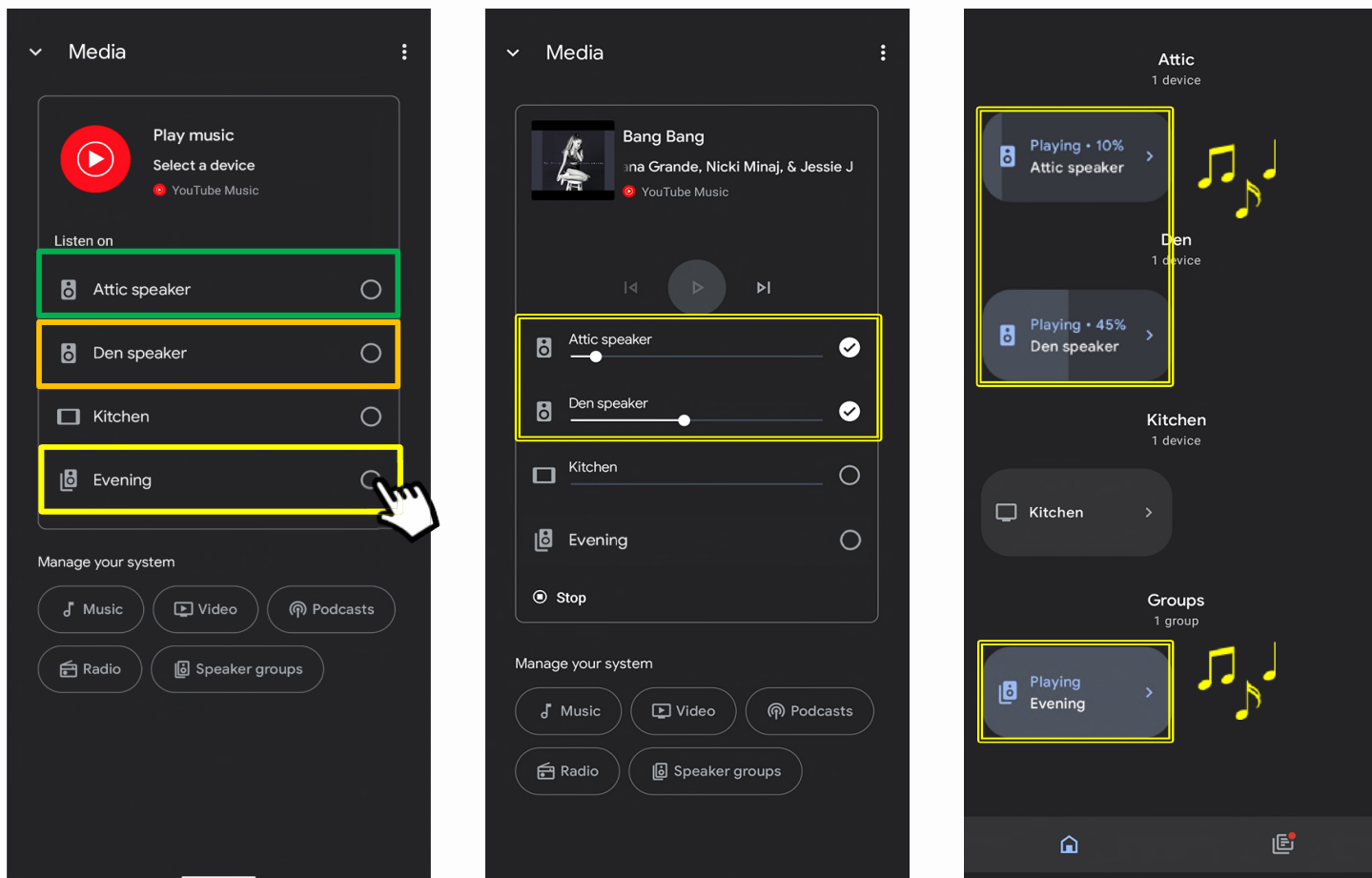*Dkt. 508-15 (8/31/2022 Schonfeld Dep Tr.) at 49:12-16*

Google's Expert
Dr. Dan Schonfeld

Google's "Redesigned" Players Satisfy "Standalone Mode" Requirements

➢ Example: Attic speaker (not playing) and Den speaker (not playing) continue to operate in standalone mode after being added to new Evening "speaker group" – new group is not launched

Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 65-68, 93, 98-99, 101, 133-134, 137

Google's "Redesigned" Players Satisfy "Standalone Mode" Requirements

➢ Launching Evening "speaker group" causes Attic and Den speakers to transition from standalone mode to group mode

Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 93-94, 100-101, 133-137
Dkt. 508-14 (1/25/2023 MacKay Dep Tr.) at 37:20-38:2, 44:1-5, 56:2-6
Dkt. 508-16 (2/3/2023 Schonfeld Dep Tr.) at 140:16-141:11

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Setup and Invocation of Google "Speaker Groups"

User creates new "speaker group" at Google controller

⬇

Google controller transmits join_group message to Google player in "speaker group"

⬇

Google player executes StopCurrentApp() function and stops current playback

⬇

Google player executes AddGroup() function and stores information about "speaker group"

Setup

⬇

User selects "speaker group" for launch at Google controller

⬇

Google controller transmits group launch message to Google player

⬇

Google player coordinates with other player(s) in group for synchronous group playback

Invocation ("Launch")

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New Google "Speaker Group" Starts in Unlaunched State

Google's Senior
Software Engineer
Ken MacKay

Q.   [W]ould this call to StopCurrentApp() … cause a speaker group to be launched?

A.   [I]s the question whether StopCurrentApp() causes the speaker group to be launched?

Q.   Yeah ….

A.   No.

***

Q.   [F]or a newly created static group … the AddGroup() function will not result in the static group becoming launched; is that correct?

A.   Yes ....

***

Q.   [Will] the end result of this process … be the creation of a new speaker group that is in an unlaunched state?

A.   Yes ....

Dkt. 508-14 (1/25/2023 MacKay Dep Tr.) at 37:20-38:2, 44:1-5, 56:2-6

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New Google "Speaker Group" Starts in Unlaunched State

Google's Expert
Dr. Dan Schonfeld

Q. [Y]ou would agree that a new speaker group will always start in an unlaunched state after its creation; is that correct?

A. Yes. … So when you create a new speaker group, all of the speakers are silent and they are waiting to be invoked before they would play back in synchrony.

Q. They are not operating in accordance with the group for synchronous playback at that point; is that correct?

A. [T]hey are not at that point coordinating to play back in synchrony.

Dkt. 508-16 (2/3/2023 Schonfeld Dep Tr.) at 140:16-141:5

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Court's Prior Infringement Ruling Applies

➤ In this regard, Google's "redesigned" players function the same as its prior players and the Court's prior infringement ruling applies

Google's Senior
Software Engineer
Ken MacKay

Q. [I]n this scenario … [will] the player … behave in the same way that it would have behaved in prior firmware versions …?

A. Prior to adding the StopCurrentApp() call?

Q. Yeah.

A. [I]t will still call StopCurrentApp() … other than that, it won't do anything differently.

Q. [T]he StopCurrentApp() function in this case is not going to cause any change … to the operational behavior of the player; correct?

A. Yes.

Dkt. 508-14 (1/25/2023 MacKay Dep Tr.) at 55:9-24

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Court's Prior Infringement Ruling Applies

Standalone mode: As explained above in Section II.B., each Accused Google Player operates in one of two mutually-exclusive modes at any given time: (1) a "standalone" mode in which the Accused Google Player is configured to play back media individually or (2) a grouped mode in which the Accused Google Player is configured to output audio in synchrony with output of audio by one or more other Accused Google Player as part of a group. Thus, each Accused Google Player is programmed with the functional capability to operate in a "standalone mode" in which the Accused Google Player "is configured to play back media individually" (rather than as part of a group). *See* Almeroth Decl., at ¶ 117-118.[9] In fact, this is the default operating mode for any Accused Google Player (e.g., after being initially set up on a Wi-Fi network), and an Accused Google Player will remain in "standalone mode" unless and until a speaker group that includes the Accused Google Player is created, saved, and then subsequently selected for launch via a Google Controller, at which point the Accused Google Player will transition from "standalone mode" to grouped mode, as explained more below with respect to limitations 1.8-1.10. *See* Almeroth Decl., at ¶ 119.

_____

[9] While operating in standalone mode in which an Accused Google Player is configured to play back media individually, the Accused Google Player can either (i) be engaging in active playback of media (i.e., outputting audio in the form of sound from built-in speakers or outputting audio in the form of an audio signal that is provided to a connected device with speakers) or (ii) not be engaging in active playback of media content. *See* Ex. L, at 8-9; Almeroth Decl., at ¶ 117-118. Whether or not an Accused Google Player serving the role of the claimed "first zone player" is engaging in active playback does not affect the functional capability described herein.

Dkt. 208 (4/14/2022 Sonos MSJ) at p. 15-16

Court's Prior Infringement Ruling Applies

Standalone mode: As explained above in Section II.B., each Accused Google Player operates in one of two mutually-exclusive modes at any given time: (1) a "standalone" mode in which the Accused Google Player is configured to play back media individually or (2) a grouped mode in which the Accused Google Player is configured to output audio in synchrony with output of audio by one or more other Accused Google Player as part of a group. Thus, each Accused

[9] While operating in standalone mode in which an Accused Google Player is configured to play back media individually, the Accused Google Player can either (i) be engaging in active playback of media (i.e., outputting audio in the form of sound from built-in speakers or outputting audio in the form of an audio signal that is provided to a connected device with speakers) or (ii) not be engaging in active playback of media content. *See* Ex. L, at 8-9; Almeroth Decl., at ¶ 117-118. Whether or not an Accused Google Player serving the role of the claimed "first zone player" is engaging in active playback does not affect the functional capability described herein.

at ¶ 119.

[9] While operating in standalone mode in which an Accused Google Player is configured to play back media individually, the Accused Google Player can either (i) be engaging in active playback of media (i.e., outputting audio in the form of sound from built-in speakers or outputting audio in the form of an audio signal that is provided to a connected device with speakers) or (ii) not be engaging in active playback of media content. *See* Ex. L, at 8-9; Almeroth Decl., at ¶ 117-118. Whether or not an Accused Google Player serving the role of the claimed "first zone player" is engaging in active playback does not affect the functional capability described herein.

Dkt. 208 (4/14/2022 Sonos MSJ) at p. 15-16

Court's Prior Infringement Ruling Applies

In sum, Google's noninfringement arguments as to limitation 1.5 fail to present triable questions and lack merit. Further, Sonos has adequately shown that the accused products practice the remaining elements of the claim (*see* Br. 11–24). Google did not dispute these contentions in its briefing. Accordingly, Sonos's motion for summary judgment of infringement is **GRANTED**.

*Dkt. 309 (7/21/2022 Court's SJ Order) at p. 11*

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Google's "Redesigned" Players Satisfy "Standalone Mode" Requirements

➢ Example: Attic speaker (not playing) and Den speaker (playing) continue to operate in standalone mode after being added to new Evening "speaker group" – new group is not launched

Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 65-67, 93, 101, 133, 135-137

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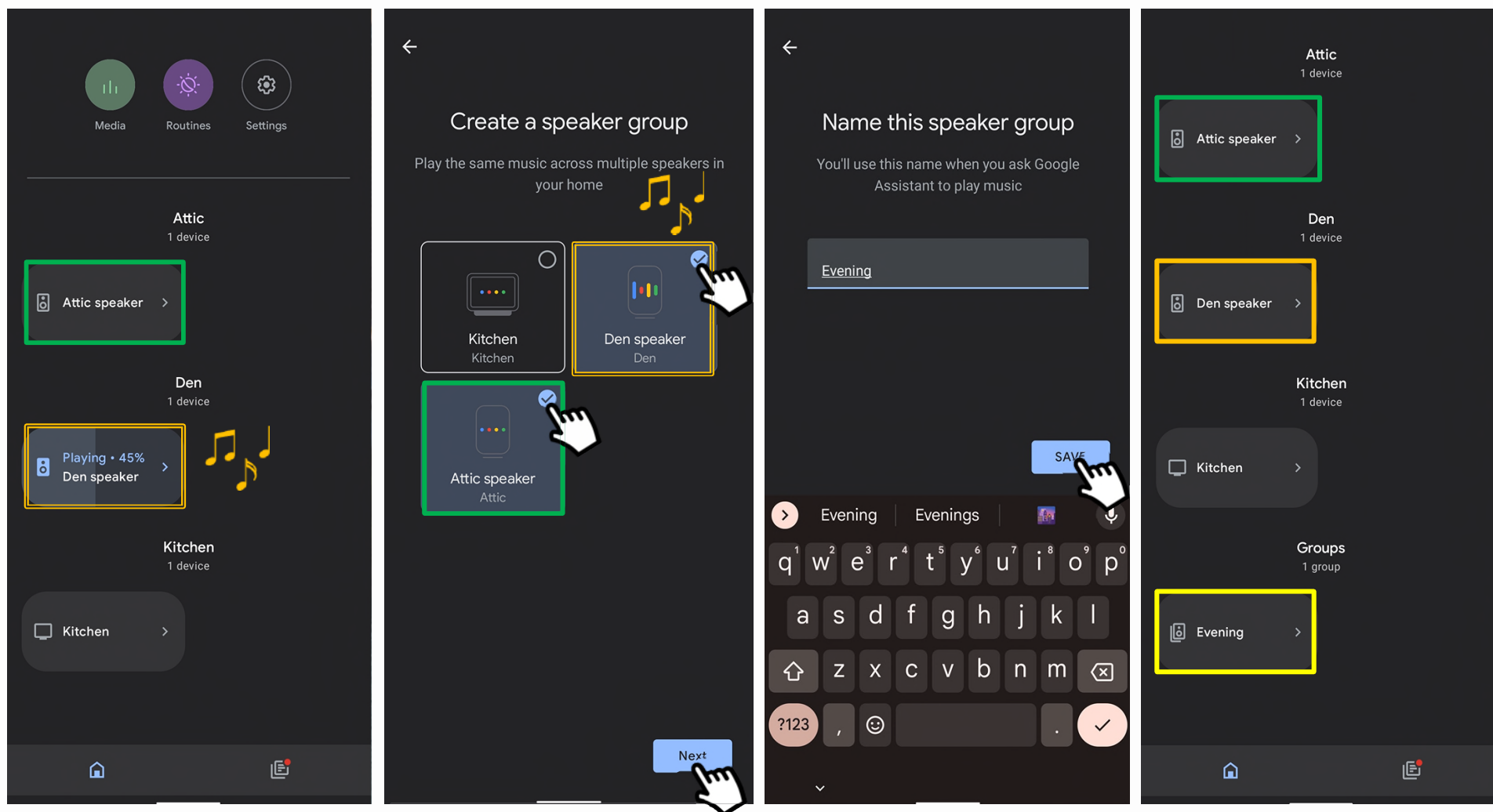
Google's "Redesigned" Players Satisfy "Standalone Mode" Requirements

➢ Launching Evening "speaker group" causes Attic and Den speakers to transition from standalone mode to group mode
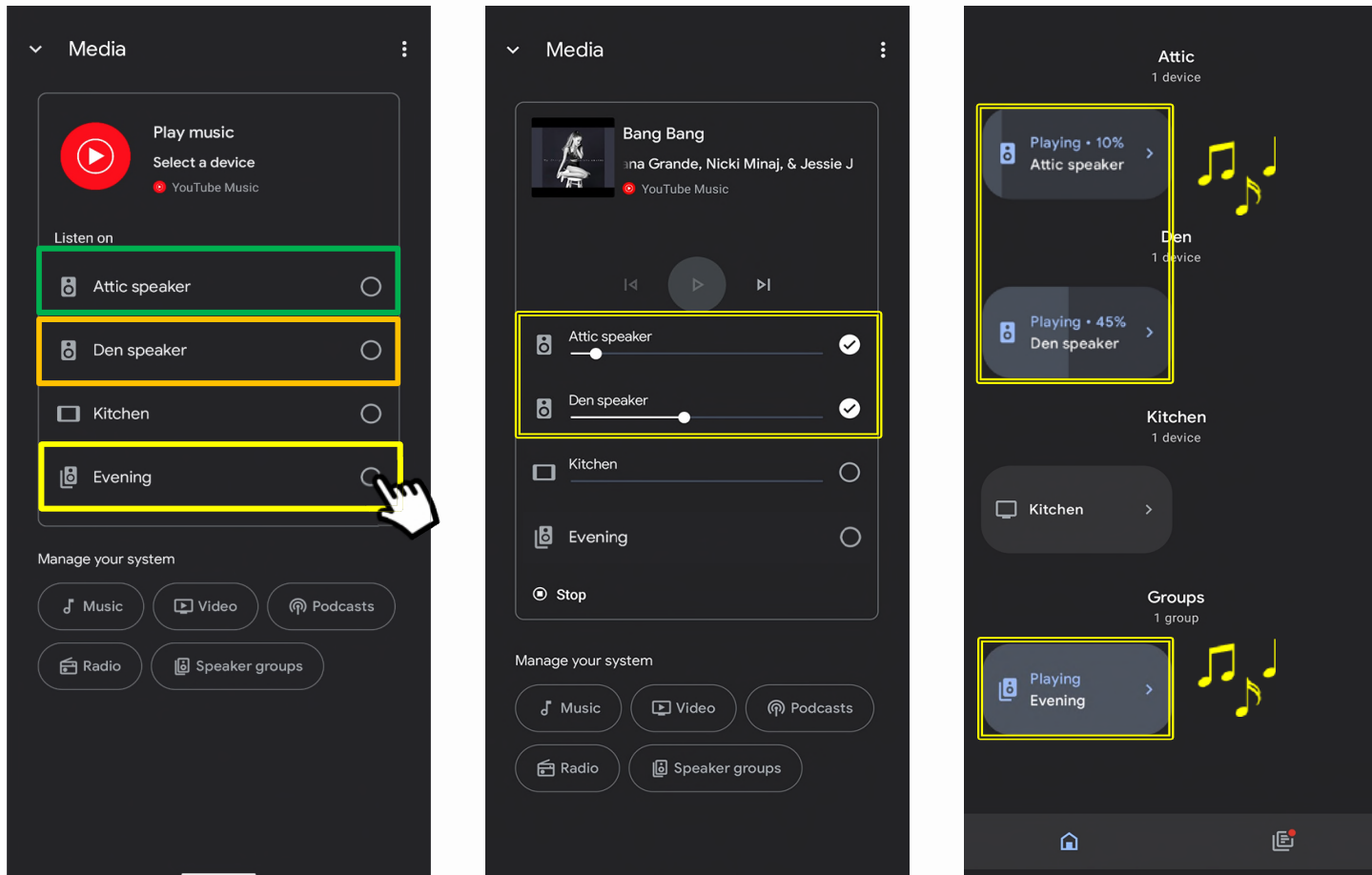
Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 93-94, 100-101, 133-137
Dkt. 508-14 (1/25/2023 MacKay Dep Tr.) at 37:20-38:2, 44:1-5, 56:2-6
Dkt. 508-16 (2/3/2023 Schonfeld Dep Tr.) at 140:16-141:11

Additional Functionality for <u>Pre-Existing</u> "Speaker Groups" Does Not Avoid Infringement

"[I]nfringement is not avoided by the presence of elements or steps in addition to those specifically recited in the claim."

Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 811 (Fed. Cir. 1999)

Google briefly objects that its users can name speaker groups something "completely abstract or random" such as "A," "B," and "C" (Opp. 7). In other words, Google argues that it should escape infringement because the accused products allow users to make speaker groups that are not bound by a thematic name. This only shows, however, that Google's products have capabilities in addition to those recited by the claim. This does not avoid infringement. *See Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 945 (Fed. Cir. 1990) (infringement is not avoided "if a claimed feature performs not only as shown in the patent, but also performs an additional function").

*Dkt. 309 (7/21/2022 Court's SJ Order) at 8-9*

Additional Functionality for <u>Pre-Existing</u> "Speaker Groups" Does Not Avoid Infringement

➢ Example: Kitchen speaker transitions from standalone mode to group mode after being added to pre-existing, pre-launched Morning group
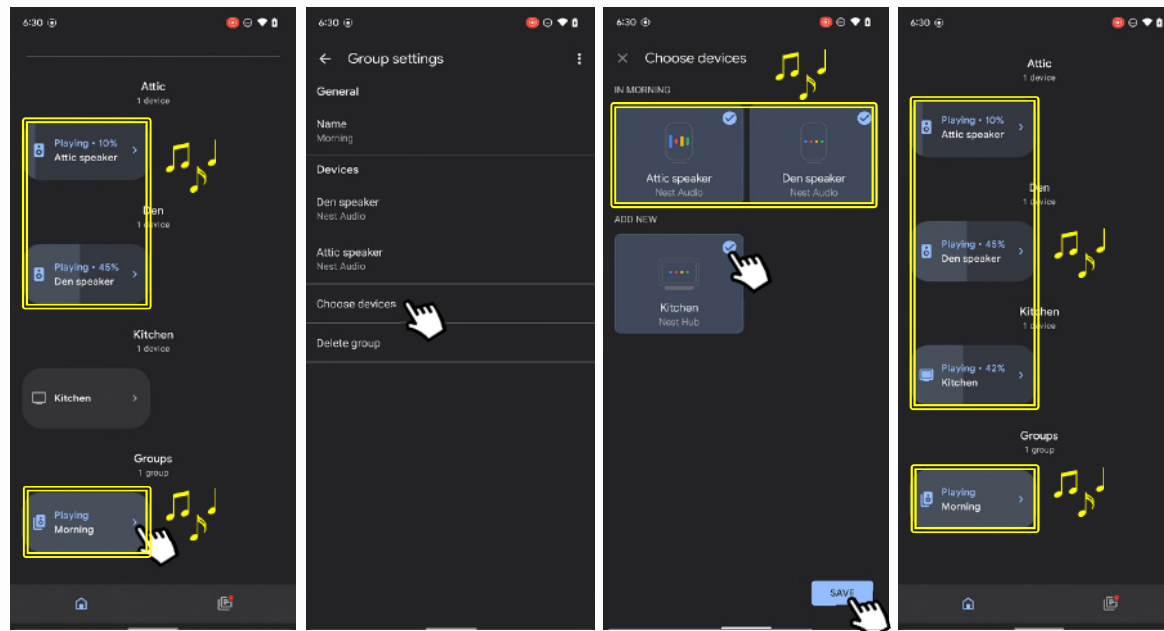

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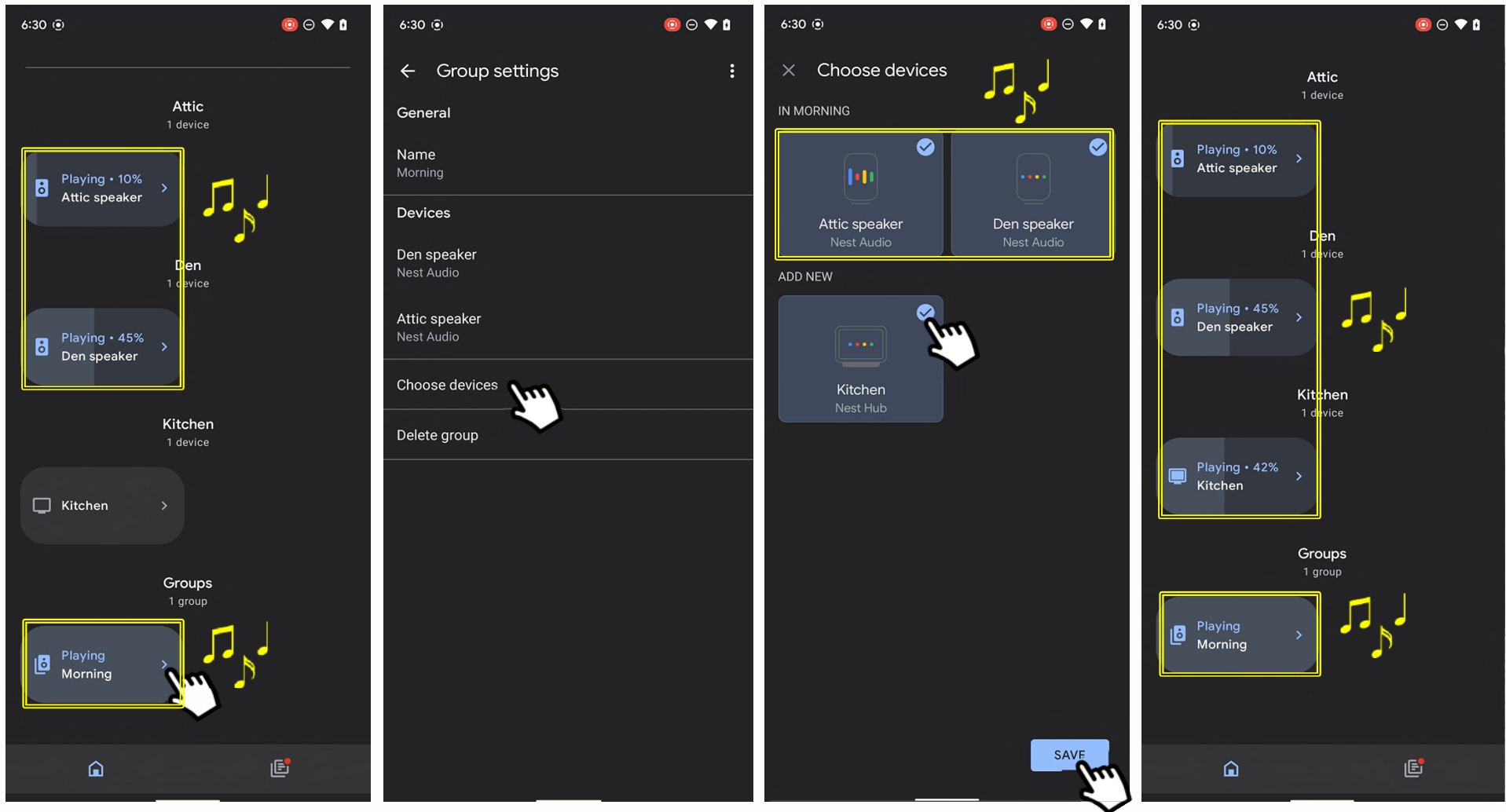
Additional Functionality for <u>Pre-Existing</u> "Speaker Groups" Does Not Avoid Infringement

New
"Speaker Group"

Pre-Existing
"Speaker Group"

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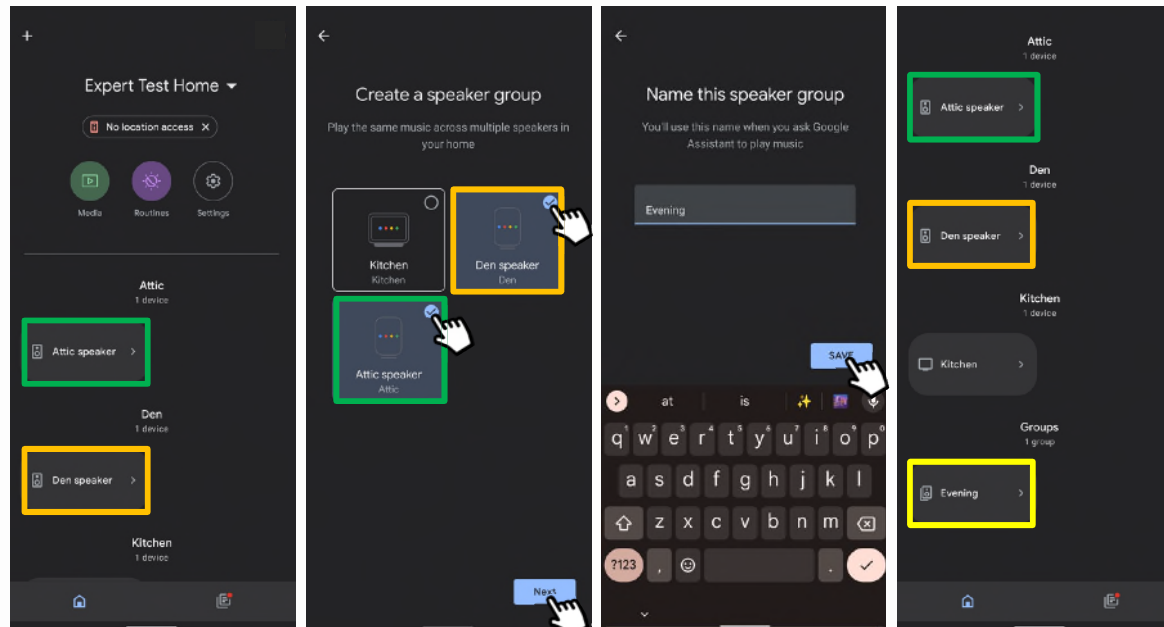
Google's Non-Infringement Argument Does <u>Not</u> Apply to the '966 Patent

➢ Unlike claim 1 of the '885 patent, asserted claims of '966 Patent do not require the "first zone player" to "continue[] to operate in standalone mode" after being added to a "zone scene"

➢ '966 claims are satisfied as long as the "computing device" (i.e., Google controller) is capable of performing each of limitations 1.5-1.10 at a time when the "first zone player" (i.e., Google player) is operating in "standalone mode"

➢ '966 claims allow for "first zone player" to leave "standalone mode" in between limitations 1.5-1.10 as long as "first zone player" can be put back into "standalone mode" before "computing device" carries out the functionality of the next limitation

➢ Thus, even if Google's "redesigned players" do not continue to operate in "standalone mode" after being added to a "speaker group" (as Google asserts), Google has not proven non-infringement of '966 claims because its players can be put back into "standalone mode"

Dkt. 508-10 (11/30/22 Almeroth Opening Report) at ¶ 733-734

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Claim 1 of '966 Patent Does <u>Not</u> Require "Zone Player" to "Continu[e] to Operate In Standalone Mode" After Being Added to "Zone Scenes"

'885 Claim 1

1. **[1.0]** A first zone player comprising: **...** **[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

> **[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

> **[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

'966 Claim 1

1. **[1.0]** A computing device comprising: **…** **[1.3]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the computing device to perform functions comprising:

[1.4] while serving as a controller for a networked media playback system comprising a first zone player and at least two other zone players, wherein the first zone player is operating in a standalone mode in which the first zone player is configured to play back media individually:

> **[1.5]**   receiving a first request to create a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked;

> **[1.6]**   based on the first request, i) causing creation of the first zone scene, ii) causing an indication of the first zone scene to be transmitted to the first zone player, and iii) causing storage of the first zone scene;

> **[1.7]**   receiving a second request to create a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the third zone player is different than the second zone player;

> **[1.8]**   based on the second request, i) causing creation of the second zone scene, ii) causing an indication of the second zone scene to be transmitted to the first zone player, and iii) causing storage of the second zone scene;

> **[1.9]**   displaying a representation of the first zone scene and a representation of the second zone scene; and

> **[1.10]**   while displaying the representation of the first zone scene and the representation of the second zone scene, receiving a third request to invoke the first zone scene; and

[1.11] based on the third request, causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players such that the first zone player is configured to coordinate with at least the second zone player to output media in synchrony with output of media by at least the second zone player.

Claim 1 of '966 Patent Does <u>Not</u> Require "Zone Player" to "Continu[e] to Operate In Standalone Mode" After Being Added to "Zone Scenes"

Sonos's Expert
Dr. Kevin Almeroth

744.   In my opinion, claim limitations 1.5-1.10/9.2-9.7 of claims 1 and 9 of the '966 Patent can be met by a "computing device" that is capable of performing each respective function of claim limitations 1.5-1.10/9.2-9.7 at a time when the "first zone player" is operating in "standalone mode," regardless of whether the "first zone player" "continues to operate in "standalone mode" during the time in-between when any two of the respective functions recited in claim limitations 1.5-1.10/9.2-9.7 are performed.   Neither claim limitation 1.4/9.1 nor claim limitation 1.11/9.8 nor any other limitation of claims 1 and 9 of the '966 Patent requires the "first zone player" to operate in "standalone mode" *continuously* while all of claim limitations 1.5-1.10/9.2-9.7 are performed by the "computing device."   Rather, with respect to the "standalone mode" requirement, the "computing device" need only be capable of (i) performing each respective function of claim limitations 1.5-1.10/9.2-9.7 at a time when a first Accused Google Player is operating in "standalone mode" and then (ii) performing the function of claim limitation 1.11/9.8, which recites, among other things, "causing the first zone player to transition from operating in the standalone mode to operating in accordance with the first predefined grouping of zone players."

Dkt. 508-10 (11/30/22 Almeroth Opening Report) at ¶ 733-734

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Google's Argument Regarding Infringement of the '966 Patent Fails

➢ Unclear, but Google's argument appears to rely on what it means for a Google player to be "added" to a "speaker group" and when that happens relative to the execution of the new StopCurrentApp() function

Even if claim differentiation did apply, however, Sonos's argument would still fail because Google's redesign prevents the computing device from operating in standalone mode *when* (not after) it is added to a group because of the operation of the StopCurrentApp() and AddGroup() commands. Mot. at 21-22. Accordingly, Google's redesign does not infringe because the first zone player does not remain in standalone *mode* when added to a speaker group—regardless of the fact that it also no longer continues to operate in standalone mode afterward.

Dkt. 538 (Google MSJ Reply) at 13

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Google's Argument Regarding Infringement of the '966 Patent Fails

➢ Unclear, but Google's argument appears to rely on what it means for a Google player to be "added" to a "speaker group" and when that happens relative to the execution of the new StopCurrentApp() function

➢ Google's argument fails for multiple reasons:

- *First*, unlike '885 claim 1, '966 claims do not recite the same "has been added" limitation

- *Second*, Google is resurrecting an argument that the Court already rejected during the last round of summary judgment regarding '885 claim 1, namely, that a Google speaker is allegedly not "added" to a "speaker group" during its creation at a Google controller but instead is "added" to the "speaker group" after receiving a "join_group" message and when the "AddGroup()" function is performed (*see Dkt. 309 at p. 9-10*)

The Court Already Rejected Google's "Has Been Added" Argument

Sonos disagrees with Google's reading of the claim. It insists that the past-tense phrase "has been added" refers only to "some 'add[]' action' that previously took place at the network device prior to the 'indication' being sent and received" (Reply Br. 4). In other words, Sonos contends that the phrase "has been added" refers to the *user's action* that adds a speaker to a zone scene. After the user takes such action — by, as a hypothetical example, tapping "add" on the Google Home app — the network device subsequently sends the "join_group message" to the accused player. This sequence of events, Sonos argues, satisfies the "has been added" limitation.

This order again sides with Sonos. The plain language of the claim does not require a follow-up indication memorializing that the zone player has already been added to the group by an initial command so that the zone player can use that information later. Rather, the claim simply requires the zone player to receive an indication from the network device that it has been added to a zone scene. Because the accused players only receive the "join_group message" after some action has been taken to add them to a group, they meet this limitation.

Dkt. 309 (7/21/2022 Court's SJ Order) at 10

Google's Argument Regarding Infringement of the '966 Patent Fails

➢ If Google is relying on the new StopCurrentApp() function to argue that a Google controller is not capable of performing all three aspects of limitations 1.6 and 1.8 of '966 claim 1 while a Google player is in "standalone mode," Google is wrong

> **[1.6]/[1.8]** based on the first/second request, i) causing creation of the first/second zone scene, ii) causing an indication of the first/second zone scene to be transmitted to the first zone player, and iii) causing storage of the first/second zone scene;

➢ '966 claim 1 written from perspective of a controller (not a player)

➢ While a Google player is in "standalone mode," a Google controller has the capability to (i) cause creation of a "speaker group" that includes the Google player, ii) cause a "join_group" message for the "speaker group" to be transmitted to the Google player, and iii) cause storage of the "speaker group"

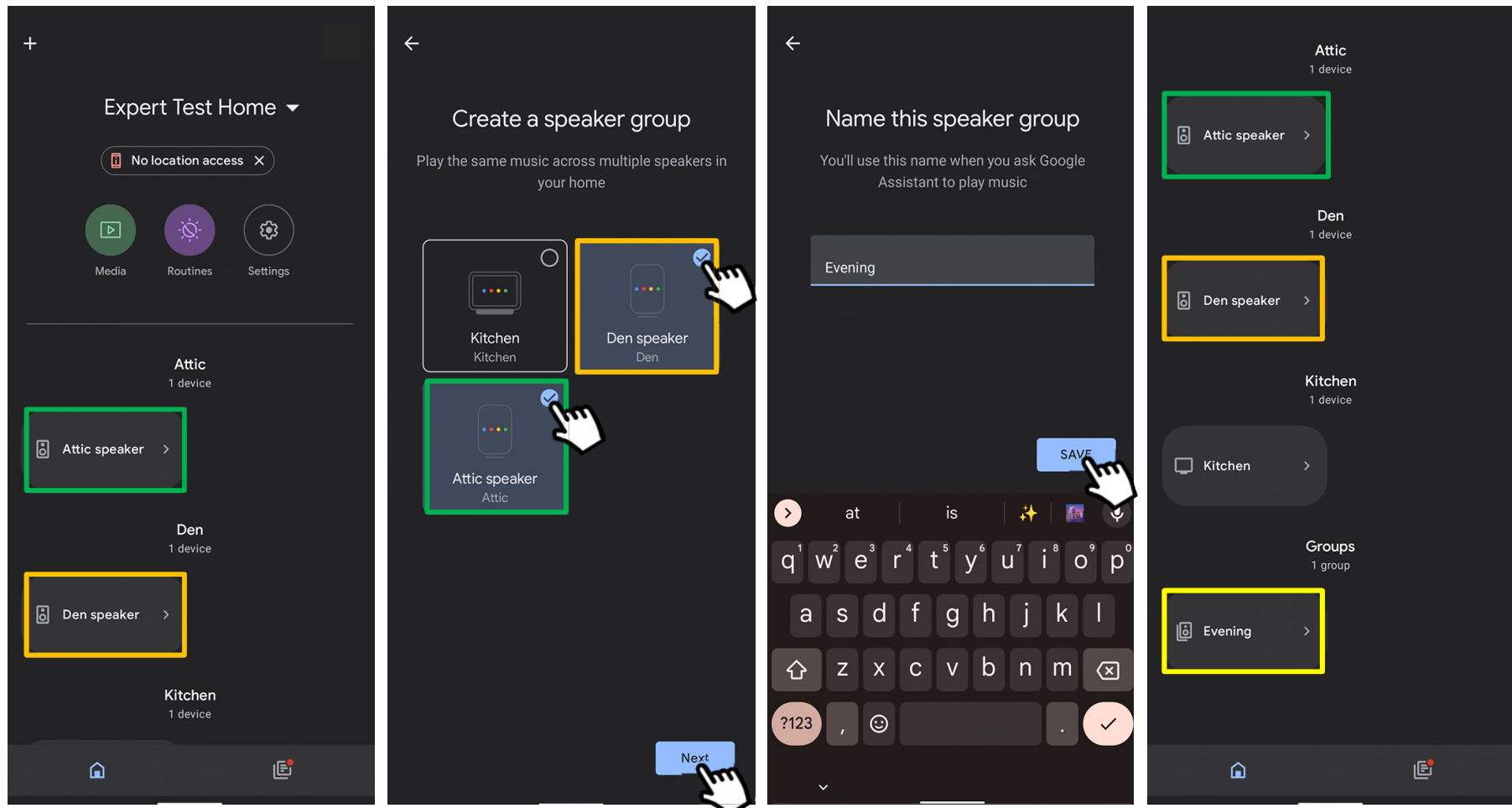*Dkt. 508-12 (1/26/23 Almeroth Supp Reply Report) at ¶ 168-194*

Google's Arguments Fail

Scenario: "Redesigned" Google player not playing audio when added to new "speaker group"

➢ Google opening brief: "redesigned" player "not operating in standalone mode" before or after being added to new "speaker group" because not playing audio (*Dkt. 483 at 22-23*)

➢ Google opening brief: After being added to new "speaker group," "redesigned" player operates in accordance with group "playing nothing because the group is playing nothing" (*id*.)

➢ Google reply brief: "redesigned" player "inactive" and not operating in any mode before or after being added to new "speaker group" because not "launched" (*Dkt. 538 at 11-12*)

- New argument and new declaration by Google engineer (*Dkt. 538-7*)

Google's Arguments Fail

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• New argument and new declaration by Google engineer (Dkt. 538-7)

"Standalone Mode" Does <u>Not</u> Require Active Playback

➢ Claim language equates "standalone mode" with being "configured to play back media individually," not with actively playing media

Dkt. 508-8 (7/18/22 Almeroth Supp Opening Showdown Report) at ¶ 163-165

➢ Google's expert confirmed that "standalone mode" does not require a player to be actively playing audio

Q. In order to meet the standalone mode, does the zone player have to be playing audio?

A. That's not my understanding.

Dkt. 508-15 (8/31/2022 Schonfeld Dep Tr.) at 49:12-16

Google's Expert
Dr. Dan Schonfeld

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Only Two Modes - "Standalone Mode" or Group Mode

➢ '885 claim 1 recites a "zone player" that can operate in one of two modes at any given time: (1) "standalone mode" for individual playback; or (2) group mode for synchronous group playback

Dkt. 508-8 (7/18/22 Almeroth Supp Opening Showdown Report) at ¶ 163-165

➢ Google's expert confirmed that a player is in "standalone mode" if it is not in group mode

Google's Expert
Dr. Dan Schonfeld

Q. What does it mean for a player to be configured to play back audio individually?

A. That it is not configured to play as part of the group ….

Dkt. 508-15 (8/31/2022 Schonfeld Dep Tr.) at 51:4-7

Google's Arguments Fail

Scenario: "Redesigned" Google player not playing audio when added to new "speaker group"

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• New argument and new declaration by Google engineer (Dkt. 538-7)

Google's "Redesigned" Players do <u>Not</u> Operate in Accordance with Group Until Group Launched

➢ A "redesigned" Google player that is added to a new "speaker group" does not operate in accordance with the group until the new "speaker group" is launched

➢ A "redesigned" Google player that is not playing audio when added to a new "speaker group" is not playing audio after being added to the group because nothing changes – the StopCurrentApp() function does nothing

➢ In a scenario where a "redesigned" Google player is playing audio when added to a new "speaker group," the player stops playing audio after being added to the group because the StopCurrentApp() function stops the playback

➢ In either case, the result of the "redesigned" player not playing audio after being added to a new "speaker group" has nothing to do with what other player(s) in the group are doing

Google's "Redesigned" Players do <u>Not</u> Operate in Accordance with Group Until Group Launched

User creates new "speaker group" at Google controller

Google controller transmits join_group message to Google player in "speaker group"

Google player executes StopCurrentApp() function and stops current playback

Google player executes AddGroup() function and stores information about "speaker group"

Setup

User selects "speaker group" for launch at Google controller

Google controller transmits group launch message to Google player

Google player coordinates with other player(s) in group for synchronous group playback

Invocation ("Launch")

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New Google "Speaker Group" Starts in Unlaunched State

Google's Expert
Dr. Dan Schonfeld

Q.   [Y]ou would agree that a new speaker group will always start in an unlaunched state after its creation; is that correct?

A.   Yes. … So when you create a new speaker group, all of the speakers are silent and they are waiting to be invoked before they would play back in synchrony.

Q.   They are not operating in accordance with the group for synchronous playback at that point; is that correct?

A.   [T]hey are not at that point coordinating to play back in synchrony.

Dkt. 508-16 (2/3/2023 Schonfeld Dep Tr.) at 140:16-141:5

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Google's "Redesigned" Players do <u>Not</u> Operate in Accordance with Group Until Group Launched

Similarly, in the scenario in which an individual speaker is not playing and is joined to a group that is not playing: the speaker calls the StopCurrentApp() command (although there is no operation of the speaker to terminate); AddGroup() joins the speaker to the non-playing group, which causes the group to elect a new leader; and the speaker receives no command to play, because the group is not playing.

Accordingly, in the scenario in which an individual speaker playing The Beach Boys is joined to a group that is not playing: StopCurrentApp() terminates the operation of the speaker in standalone mode (causing The Beach Boys to stop playing); AddGroup() joins the speaker to the non-playing group; and the speaker receives no command to play, because the group is not playing.

Dkt. 483 (Google MSJ) at 22-23

StopCurrentApp() Function Does <u>Not</u> Depend on State of "Speaker Group"

Google's Senior Software Engineer Ken MacKay

Q. So with respect to this StopCurrentApp() function, will that perform any checking of group state as part of stopping the app?

A. No, I don't think so.

***

Q. [T]here's no group information of any kind passed into that function; is that right?

A. Correct. … [N]o group information is passed into the function. That's right.

Dkt. 508-14 (1/25/2023 MacKay Dep Tr.) at 37:3-19

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Google's Arguments Fail

Scenario: "Redesigned" Google player not playing audio when added to new "speaker group"

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• New argument and new declaration by Google engineer (*Dkt. 538-7*)
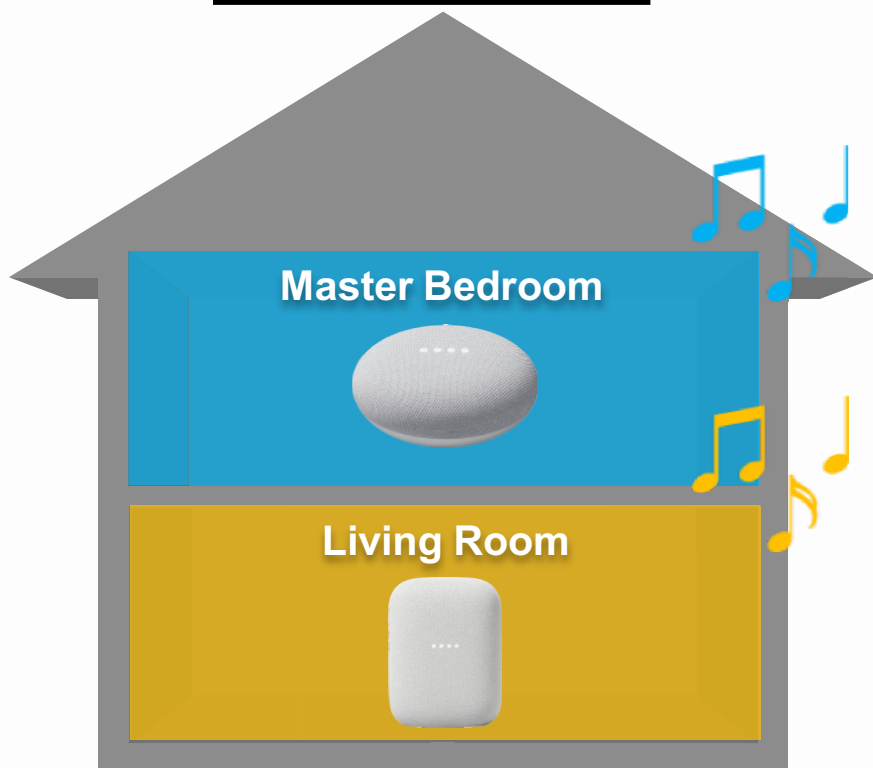
44

What is "Standalone Mode"?

➢ '885 claim 1 recites "operating in a <u>standalone mode</u> in which the first zone player is configured to play back media individually"

➢ A fundamental characteristic of any audio player that is plugged in and operating is that it is configured to play back audio, either individually or as part of a group

➢ In '885 claim 1, "standalone mode" is used to distinguish the operating mode of a player that is configured for individual playback from the operating mode of a player that is configured for synchronous group playback (referred to herein as "group mode")

➢ '885 claim 1 equates "standalone mode" with being "<u>configured to play back media individually</u>," <u>not</u> with <u>actively</u> playing media

  • A player can be in "standalone mode" whether or not the player is actively playing audio
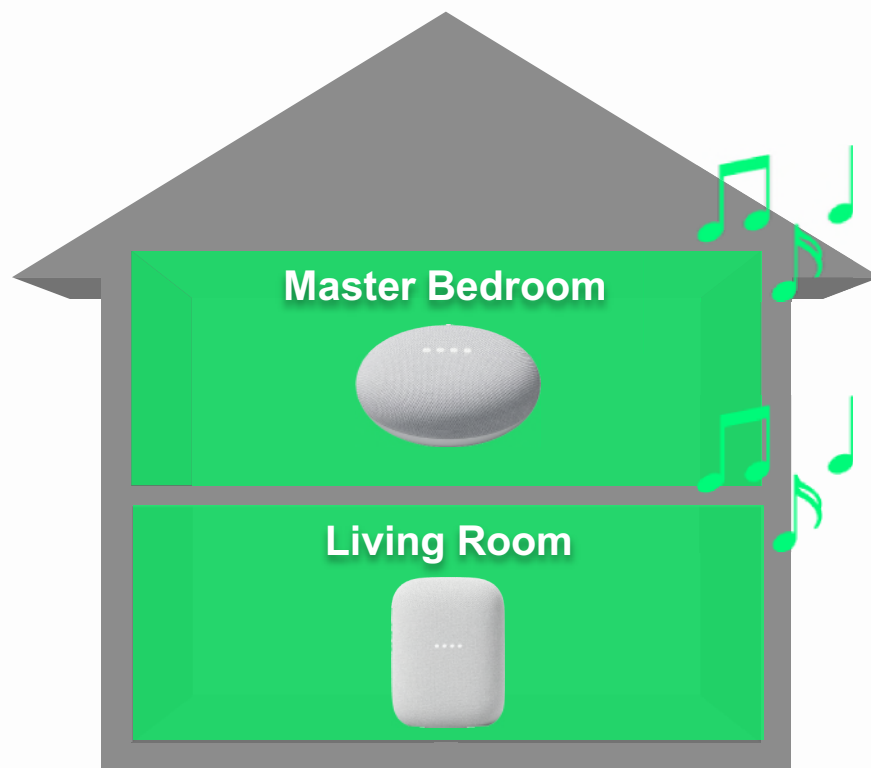
Dkt. 483-4 (11/30/22 Almeroth Opening Report) at ¶ 126, 409-412
Dkt. 508-8 (7/18/22 Almeroth Supp Opening Showdown Report) at ¶ 163-164

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Only Two Modes - "Standalone Mode" or Group Mode

➢ In a multiroom audio system like Google's, a player is either operating in (1) "standalone mode" for individual playback or (2) group mode for synchronous group playback – no other operating mode

Standalone Mode

Group Mode

Dkt. 483-4 (11/30/22 Almeroth Opening Report) at ¶ 126, 409-412

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Only Two Modes - "Standalone Mode" or Group Mode

➢ Google's expert confirmed that a player is in "standalone mode" if it is not in group mode

Google's Expert
Dr. Dan Schonfeld

Q. What does it mean for a player to be configured to play back audio individually?

A. That it is not configured to play as part of the group ….

Dkt. 508-15 (8/31/2022 Schonfeld Dep Tr.) at 51:4-7

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"Standalone Mode" Does <u>Not</u> Require Active Playback

➢ Google's expert confirmed that "standalone mode" does not require a player to be actively playing audio
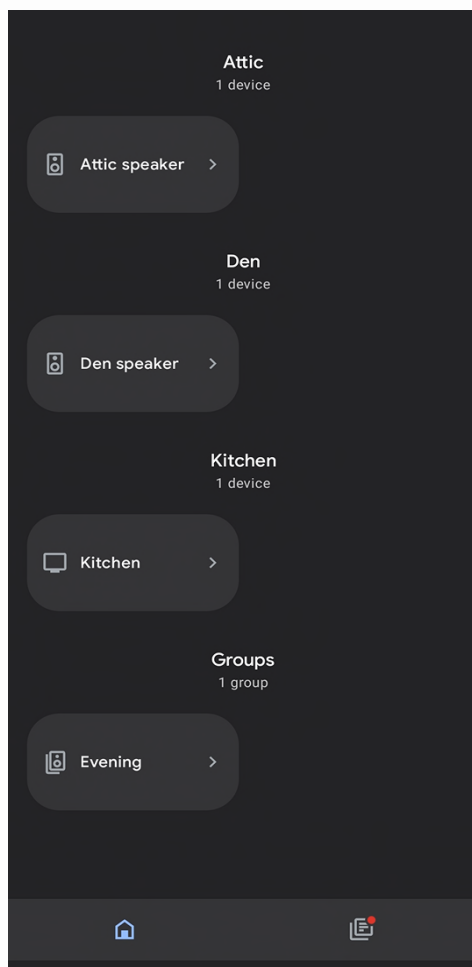
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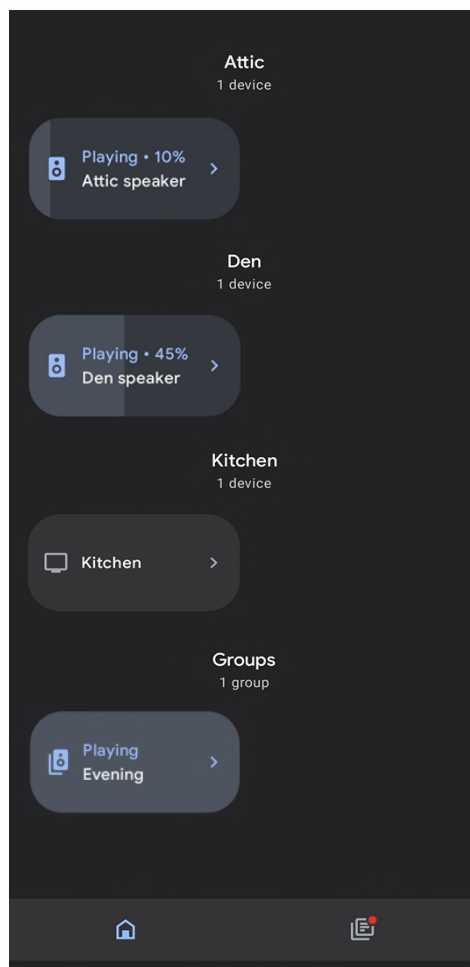
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Dkt. 508-15 (8/31/2022 Schonfeld Dep Tr.) at 49:12-16

Google's Expert
Dr. Dan Schonfeld

Google's Non-Operating Mode is Contrived
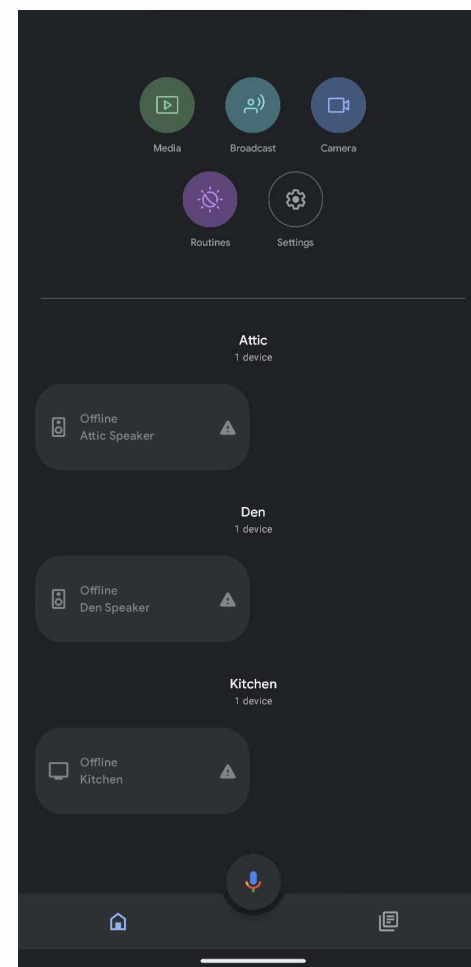
Standalone Mode   **Group Mode**   **Non-Operating Mode**

Google's Non-Operating Mode is Contrived

➢ To operate in "standalone mode," claim language does not require the player to (i) receive an "instruction" to operate in "standalone mode" or (ii) be "invoked" ("launched" in Google's terms)

➢ In contrast, to operate in group mode, claim language requires that the player (i) receive an "instruction" to operate in group mode and (ii) be part of a group that has been "invoked" such that the player is "configured to coordinate" with at least one other player for synchronous group playback

➢ Thus, contrary to Google's assertion, while a Google "speaker group" does need to be "launched" to satisfy the claimed group mode, a Google player does not need to be "launched" to satisfy the claimed "standalone mode"

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➤ To operate in "standalone mode," claim language does not require the player to (i) receive an "instruction" to operate in "standalone mode" or (ii) be "invoked" ("launched" in Google's terms)

➤ In contrast, to operate in group mode, claim language requires that the player (i) receive an "instruction" to operate in group mode and (ii) be part of a group that has been "invoked" such that the player is "configured to coordinate" with at least one other player for synchronous group playback

➤ Thus, contrary to Google's assertion, while a Google "speaker group" does need to be "launched" to satisfy the claimed group mode, a Google player does not need to be "launched" to satisfy the claimed "standalone mode"

'885 Claim 1

1. **[1.0]** A first zone player comprising: ... **[1.4]** program instructions stored on the non-transitory computer-readable medium that, when executed by the one or more processors, cause the first zone player to perform functions comprising:

[1.5] while operating in a standalone mode in which the first zone player is configured to play back media individually in a networked media playback system comprising the first zone player and at least two other zone players:

> **[1.6]** (i) receiving, from a network device over a data network, a first indication that the first zone player has been added to a first zone scene comprising a first predefined grouping of zone players including at least the first zone player and a second zone player that are to be configured for synchronous playback of media when the first zone scene is invoked; and

> **[1.7]** (ii) receiving, from the network device over the data network, a second indication that the first zone player has been added to a second zone scene comprising a second predefined grouping of zone players including at least the first zone player and a third zone player that are to be configured for synchronous playback of media when the second zone scene is invoked, wherein the second zone player is different than the third zone player;

[1.8] after receiving the first and second indications, continuing to operate in the standalone mode until a given one of the first and second zone scenes has been selected for invocation;

[1.9] after the given one of the first and second zone scenes has been selected for invocation, receiving, from the network device over the data network, an instruction to operate in accordance with a given one of the first and second zone scenes respectively comprising a given one of the first and second predefined groupings of zone players; and

[1.10] based on the instruction, transitioning from operating in the standalone mode to operating in accordance with the given one of the first and second predefined groupings of zone players such that the first zone player is configured to coordinate with at least one other zone player in the given one of the first and second predefined groupings of zone players over a data network in order to output media in synchrony with output of media by the at least one other zone player in the given one of the first and second predefined groupings of zone players.

Google's Non-Operating Mode is Contrived

➢   During prior round of summary judgment, Google did not challenge that its players only operate in two modes: (1) "standalone mode" or (2) group mode

> **Standalone mode:**   As explained above in Section II.B., each Accused Google Player operates in one of two mutually-exclusive modes at any given time: (1) a "standalone" mode in which the Accused Google Player is configured to play back media individually or (2) a grouped mode in which the Accused Google Player is configured to output audio in synchrony with output of audio by one or more other Accused Google Player as part of a group. Thus, each Accused Google Player is programmed with the functional capability to operate in a "standalone mode" in which the Accused Google Player "is configured to play back media individually" (rather than as part of a group). *See* Almeroth Decl., at ¶ 117-118.[9] In fact, this is the default operating mode for any Accused Google Player (e.g., after being initially set up on a Wi-Fi network), and an Accused Google Player will remain in "standalone mode" unless and until a speaker group that includes the Accused Google Player is created, saved, and then subsequently selected for launch via a Google Controller, at which point the Accused Google Player will transition from "standalone mode" to grouped mode, as explained more below with respect to limitations 1.8-1.10. *See* Almeroth Decl., at ¶ 119.
>
> _____
>
> [9] While operating in standalone mode in which an Accused Google Player is configured to play back media individually, the Accused Google Player can either (i) be engaging in active playback of media (i.e., outputting audio in the form of sound from built-in speakers or outputting audio in the form of an audio signal that is provided to a connected device with speakers) or (ii) not be engaging in active playback of media content. *See* Ex. L, at 8-9; Almeroth Decl., at ¶ 117-118. Whether or not an Accused Google Player serving the role of the claimed "first zone player" is engaging in active playback does not affect the functional capability described herein.

Dkt. 208 (4/14/2022 Sonos MSJ) at p. 15-16

Google's Reliance on Dr. Schmidt's '033 Statement is Misplaced

➢ Google's reliance on Dr. Doug Schmidt's statement about different claim language from the unrelated '033 Patent is misplaced (*Dkt. 483 at 23*)

> 170.   Moreover, as part of transitioning from the non-Casting mode to the Casting mode, the Sender becomes no longer configured for playback of the Watch Next queue such that, if the Sender was previously playing back media from the Watch Next queue, the YouTube Sender stops its own playback. *See, e.g.*, Mo Dep. Tr., 133:22-134:5(**Q:** "So if the YouTube sender was playing back media when a user decides to cast [to] a receiver, the YouTube sender will stop its own playback; correct?" **A:** "That is true, the playback on the sender device won't continue.").

11/30/2022 Schmidt Opening Report at ¶ 170

➢ Google improperly interprets this in the abstract to mean that if any device (e.g., a Google speaker) stops playing audio, then it is no longer configured for playback of any kind

➢ In the proper '033 Patent context, this refers to, e.g., a Google smartphone that transitions from a playback mode where the smartphone is configured for playback of a remote queue to a controller mode where the smartphone is configured to control a Google speaker's playback of the remote queue, which involves the smartphone stopping its own playback of the remote queue

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Google's Reliance on Dr. Schmidt's '033 Statement is Misplaced
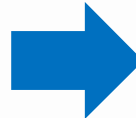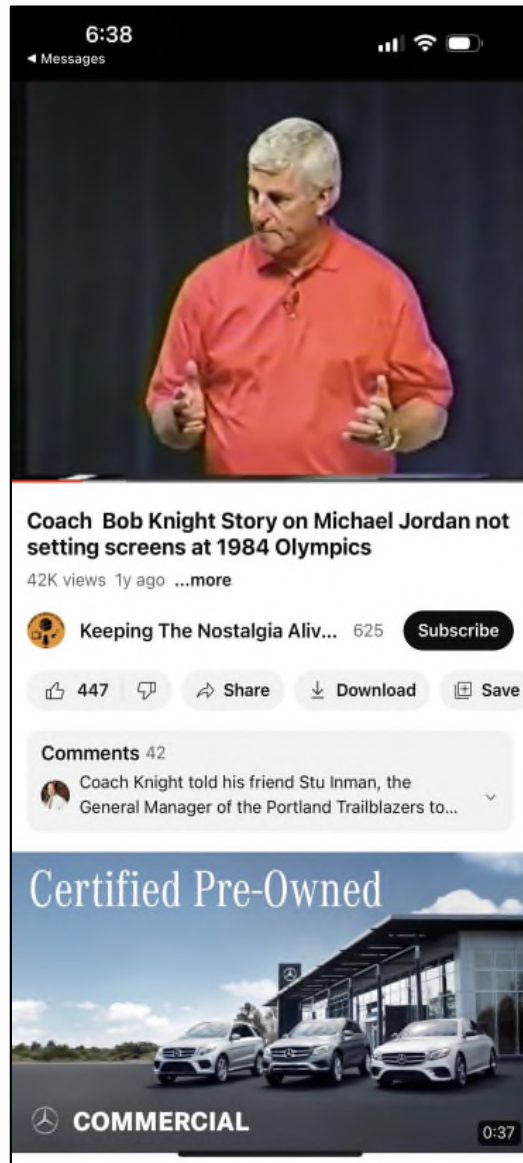
Limitation 1.9 of '033 Claim 1

[1.9]   after detecting the indication [that playback responsibility for the remote playback queue has been successfully transferred from the computing device to the at least one given playback device], transitioning from i) the first mode in which the computing device is configured for playback of the remote playback queue to ii) a second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue and the computing device is no longer configured for playback of the remote playback queue.

➢   '033 claims recite a "computing device" (e.g., a Google smartphone) transitioning from (i) a "first mode in which the computing device is configured for playback of the remote playback queue" to (ii) a "second mode in which the computing device is configured to control the at least one given playback device's playback of the remote playback queue"

➢   Unlike '885 and '966 claims, '033 claims do not recite anything about a "zone player" (e.g., a Google speaker) transitioning from (i) a "standalone mode" where player is configured for individual playback to (ii) a group mode where player is configured for synchronous group playback

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Google's Reliance on Dr. Schmidt's '033 Statement is Misplaced

Playback Mode   **Controller Mode**